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The Chemical Company

WATERPLUG

Ultra Rapid Setting Mortar to Plug Active Water Leaks

Description of Product

WATERPLUG, when mixed with clean water, provides a ready to use ultra rapid setting durable plugging mortar for active water leaks in concrete and masonry. The material expands as it cures to form a watertight seal with similar characteristics to concrete.

Fields of Application

WATERPLUG is used to stop active water or seepage under pressure through joints, cracks and holes in concrete or masonry, where a normal mortar would be washed away and resin mortars would not bond.

Areas of use include:

- As a seal for construction joints or floor joints prior to basement tanking with THOROSEAL®.
- For instant sewer connections
- For sealing cracks and construction joints in reservoirs and other water retaining structures
- For rapid anchoring of bolts, conduits, pipes, railings, sanitary equipment, etc.
- Joint filling, pointing between concrete segments in concrete and brick tunnels, sewage systems, pipes and mines.

Features and Benefits

- Ultra-rapid set, instant plugging of leaks
- Requires the addition of water only
- Expands as it sets, ensuring a permanent watertight seal
- Similar characteristics and compatible with concrete
- Chloride-free
- Does not promote corrosion of the reinforcement

Typical Properties [(a)] / Technical Data

Wet Density, kg/m^3	2140
Maximum particle size, mm	0.8
Compressive strength, N/mm^2	
30 minutes	13.8
24 hours	31.0
7 days	44.3
28 days	52.8
Flexural strength, N/mm^2	
30 minutes	2.7
24 hours	6.1
7 days	6.3
28 days	7.0
Tensile strength, N/mm^2	
28 days	3.3

[(a)] Typical value at 20°C

Application Procedure

Preparation of Substrate

Cracks or holes should be cut out to a minimum width and depth of 20mm, cutting the sides as square as practicable. Undercut if possible. Avoid leaving a V-section. Do not feather-edge.

Flush out the hole or crack with water at high pressure in order to remove all loose particles and dust.

All surfaces must be dampened with clean water immediately prior to application of WATERPLUG.

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Mixing and Application

Mixing should only be done by hand.

For plugging active leaks:
Mix, in a suitable container, only sufficient material (0.5kg) that can be placed by hand in one application.

Mix quickly and well to a stiff consistency (approximately 1 part of water to 4 parts of WATERPLUG by volume). Do not overmix.

Hold the material in a gloved hand until slight warmth is felt or setting occurs.

Then press WATERPLUG mortar firmly into the opening; exert full pressure, without moving the hand or trowel.

Do not remove the hand too quickly.

If the opening is too big to be closed with 0.5kg of WATERPLUG, work from the sides to the middle, following the above procedure.

After stopping the active water, trim off the patch so that it is uniformly level with the surrounding wall surfaces.

For sealing cracks at the junction of floor and wall in an existing construction:

Cut out the crack at least 20mm wide and deep, cutting back into the wall slightly.

Flush away all cuttings and dirt.

Force WATERPLUG mortar into the prepared crack and smooth it out.

Form a 45^{o} cove or fillet at the junction of floor and wall of approximately 35-45 mm.

For sealing the junction between a concrete floor and a masonry wall in new construction:

Form a rebate throughout the basement and sub-basement rooms and pits by inserting a strip of wood 20mm x 20mm at the junction of vertical masonry walls and the concrete floor slabs.

The top edge of the strip should be laid true and level with finished concrete floors and left in place until fresh concrete has cured.

Remove the wood strip previously inserted.

Wash the groove with clean water from a hose pipe to remove debris.

Fill the groove with WATERPLUG mortar mixed to a stiff consistency; force or tamp it into place with a round-nosed tool to form a cove between the floor and wall.

Keep the WATERPLUG mortar damp for 15 minutes if no active water is present.

To repair leaking mortar joints and cracks in masonry walls, or cracks in concrete walls:

Cut out the defective mortar joints or cracks to a minimum width and depth of 20mm.

Undercut if possible.

Force WATERPLUG into the crack and keep it damp for at least 15 minutes.

For holes, blisters, patches, honeycomb and other construction faults in concrete walls:

Mix WATERPLUG with water to the consistency of stiff mortar and fill all holes, blisters, patches, honeycombing and other construction faults flush with the surrounding surfaces.

Scratch the finish for later applications.

For anchoring bolts or metal posts in concrete or masonry:

Drill a hole deep enough to secure the bolt or post properly and large enough so there is at least 10mm on all sides of it.

Fill the hole with WATERPLUG mortar and tamp it down so that the entire hole is full.

Immediately centre the bolt or post over the hole and force it into the WATERPLUG mortar.

Tamp the WATERPLUG mortar firmly around the bolt or post and keep moist for 15 minutes.

Curing

Final setting time, 2 - 4 minutes.

Once the placed WATERPLUG mortar has stiffened sufficiently, dampen with clean water and maintain in a damp condition for a minimum of 15 minutes.

Coverage

1kg of powder will fill approximately $585cm^3$ or a joint 20mm x 20mm x 1.45m.

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Packaging

THORO®WATERPLUG is available in 5kg cans and 25kg pails.

Storage

All materials should be stored under cover, clear of the ground and stacked not more than 4 pails high. Protect the materials from all sources of moisture and frost.

Shelf Life

Rotate stock in order not to exceed the shelf life of 12 months. Once opened the material should be used as soon as possible.

BASF Construction Chemicals (UK) Ltd
PO Box 4
Earl Road
Cheadle Hulme
Cheadle
Cheshire
SK8 6QG
Tel: +44 (0) 161 485 6222
Fax +44 (0) 161 488 5220
www.basf-cc.co.uk

Health and Safety
*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

Powder Products
Should be handled to minimise dust formation; use light mask if excessive dust unavoidable. Cement powders when wet or moistened can cause burns to skin and eyes, which should be protected during use.

Spillage
Chemical products can cause damage; clean spillage immediately.

Disclaimer:
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